

DATA HANDLING STATISTICS

VICTORIA SHANGHAI ACADEMY YEAR 6

NAME: Rosanna Yung ()
CLASS: Year 6 (Answer)

Which is more suitable for showing the following data, a bar chart or a broken line graph?

Circle the answer and give reasons.

- | | |
|---|---|
| 1. The number of pupils in each level this year. | (<u>bar chart</u> / broken line graph) |
| 2. Kenny's body weight in each month of this year. | (bar chart / <u>broken line graph</u>) |
| 3. The population of Hong Kong from 2000 to 2005. | (bar chart / <u>broken line graph</u>) |
| 4. The number of each kind of book in the public library. | (<u>bar chart</u> / broken line graph) |

Reasons:

for ① and ④ the data is discrete, they have no relationship and not a trend can be seen.

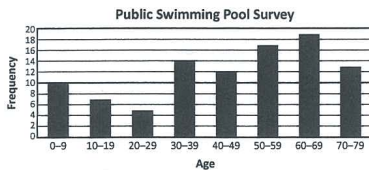
for ② and ③ the data is continuous, they have a trend and involve a continuous period of time.

Collecting and analysing data – grouped data

If a large amount of data is gathered in a survey then it needs to be grouped. This makes it much easier to read and make sense of. In this example, 97 people were surveyed to find out the age of people entering a public swimming pool. Notice how the ages were organised into group intervals of similar amounts.

Age of Swimmer									
1	11	29	31	40	55	60	77		
1	11	22	32	44	51	61	77		
3	14	25	39	49	52	62	78		
5	16	23	30	44	53	60	71		
2	12	22	31	41	55	69	79		
7	15		32	40	54	68	76		
3	14		39	42	55	61	77		
3			36	44	58	66	70		
1			39	41	56	60	71		
2			30	47	51	65	72		
			31	40	50	60	74		
			32	48	50	65	73		
			32		51	61	70		
			37		50	60			
					57	66			
					56	67			
					59	66			
					67				
					69				

Public Swimming Pool Survey		
Age	Tally	Frequency
0-9		10
10-19		7
20-29		5
30-39		14
40-49		12
50-59		17
60-69		19
70-79		13



From the grouped data we can create a column graph that clearly shows the frequency of each age range.

What do you think this graph would look like if the data wasn't grouped? Yes, it would be a very wide graph.

Collecting and analysing data – grouped data

- 2 These are your class average scores for Level 2 Live Mathematics. Your school maths committee wants to see whether Level 2 is appropriate for your class but doesn't want individual students to be identified in the meeting.

Mia	45	Amber	50	Jamie	46	Paige	30	Max	59
Omar	22	Phoebe	47	Jacob	50	Nicole	43	Dylan	39
Pablo	36	Natasha	45	Ethan	36	Abbie	42	Sara	47
Sean	39	Niamh	23	Charlie	23	Mia	39	Sophie	13
Thanh	43	Zoe	13	Bradley	20	Imogen	9	Yasmin	50

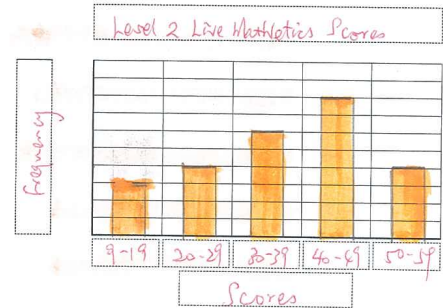
- a Decide how you will group the data.

- b Tally the data in the frequency table. Remember to give it a title and category labels.

Scores	Tally	Frequency
9-19		3
20-29		4
30-39		6
40-49		8
50-59		4

accept reasonable answer

- 3 Now take the grouped data from the table above and represent it on a column graph for the committee. Give the graph the appropriate title and labels.



If a score between 20 and 30 means that the challenge level is about right, what recommendations would you make to the committee for this class?

Level 2 is too easy for most of the students in the class

Name: _____ ()

Date: _____

Class: 6 _____

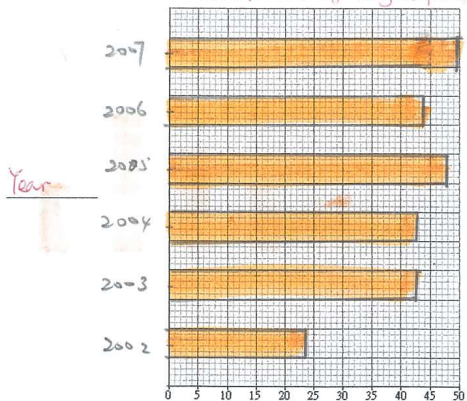
Marks: _____

Drawing and Colouring

1. The population of City A is shown in the table below. Round off the population to the nearest ten thousand. Then make a bar chart.

Year	2002	2003	2004	2005	2006	2007
Population	235 067	429 050	432 060	479 201	437 675	501 211
Rounded off to the nearest ten thousand (people in ten thousands)	24	43	43	48	44	50

Title: Population of City A from 2002-2007



Population (in ten thousand)

1

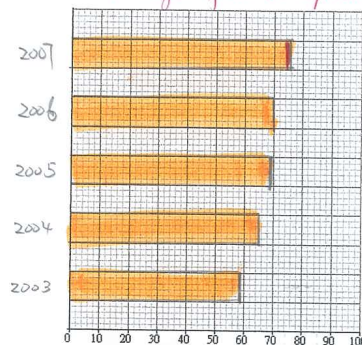
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3. The profit of Tin Tin Department Store is shown in the table below. Round off the profit to the nearest hundred thousand. Then make a bar chart.

Year	2003	2004	2005	2006	2007
Profit(\$)	5 924 687	6 452 111	6 921 450	7 031 682	7 416 793
Rounded off to the nearest hundred thousand (dollars in hundred thousands)	59	65	69	70	74

Title: The Profit of Tin Tin Department Store



Profit (\$ in hundred thousand)

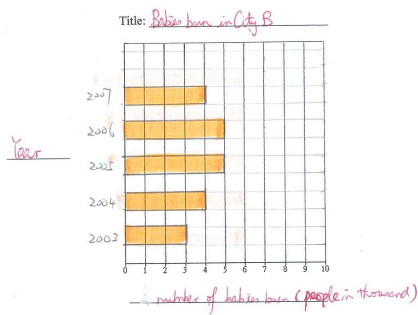
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5. The number of babies born in City B is shown in the table below. Round off the number of babies born to the nearest thousand. Then make a bar chart.

Year	2003	2004	2005	2006	2007
Number of babies born	3128	3674	4521	4656	4014
Rounded off to the nearest thousand (people in thousands)	3	4	5	5	4



5

P5

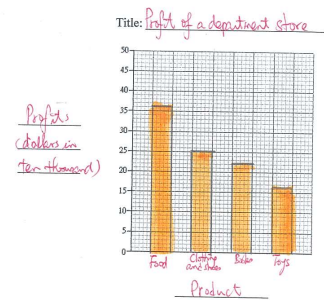
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7. Rewrite the data below. Then make a bar chart.

The profit of different kinds of products of a department store:

F chicken legs	\$ 99 677	F rice	\$ 84 566
B Chinese books	\$ 76 789	B English books	\$ 89 786
T toy cars	\$ 82 125	T dolls	\$ 78 114
D dictionaries	\$ 56 458	C shoes	\$ 66 842
F sushi	\$ 77 175	F vegetables	\$ 94 573
C dresses	\$ 93 458	C trousers	\$ 85 145

Product	Food	Clothing and shoes	Books	Toys
Profit (\$)	355991	245845	228333	160229
Rounded off to the nearest ten thousand (dollars in ten thousands)	36	25	22	16



7

P6

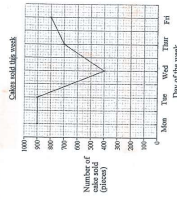
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Reading Broken Line Graphs

Name: _____ Date: _____
Class 6 _____ Marks: _____

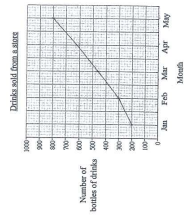
(A) Short Questions

1. The broken line graph shows the cakes sold this week.



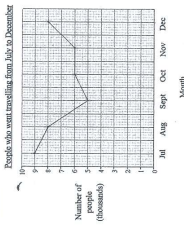
- (a) The smallest number of cakes was sold on Wednesday 300 dozens of cakes were sold.
(b) The number of cakes sold from Monday to Friday was 3700 dozens. The number of cakes sold on Saturday was 800 dozens. The difference in sales between Thursday and Sunday was 200 dozens.

2. The broken line graph shows the drinks sold from a store.



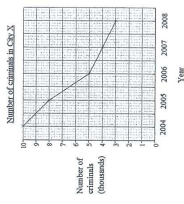
- (a) The smallest number of bottles of drinks was sold in January 200 bottles of drinks were sold.
(b) The total number of bottles of drinks sold in February and April was 900.
(c) According to the broken line graph above, the bar graph estimates that the sales volume in June will decrease / decrease.

5. The broken line graph below shows the number of people who went travelling from July to December.



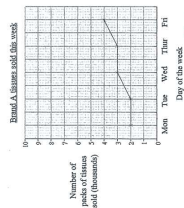
- (a) The number of people who went travelling between September and September decreased.
(b) The number of people who went travelling between September and December increased.
(c) The largest number of people who went travelling was in July.

6. The broken line graph below shows the number of criminals in City X from 2004 to 2008.



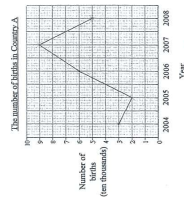
- (a) The number of criminals in City X (increased / decreased) remained unchanged from 2004 to 2008.
(b) The difference in the number of criminals between 2004 and 2008 was 10000.
(c) It is estimated that the number of criminals in 2009 will (increase / remain unchanged) / decrease.

9. The broken line graph below shows the sales volume of Fruit A in town A this week.



- (a) The largest number of packs of fruit was sold on Friday. 4000 packs of fruit were sold.
- (b) The smallest number of packs of fruit was sold on Thursday. Both were 2000 packs.
- (c) The total number of packs of fruit sold this week was 14000.
- (d) The average number of packs of fruit sold was $\frac{2800}{5} = 5600$ each day.

10. The broken line graph below shows the number of births in Country A from 2004 to 2008.



- (a) The largest number of births was in 2005. 7000 births were born.
- (b) The smallest number of births was in 2007. 2000 births were born.
- (c) The number of births was increasing between 2005 and 2007.

Drawing Broken Line Graphs

Name: _____ ()

Date: _____

Class: 6 _____

Marks: _____

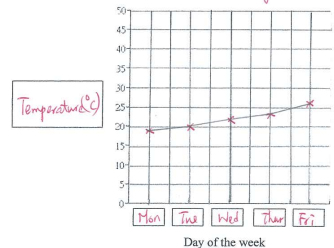
Drawing and Colouring

1. The table below shows the temperature in City Y last week.

Use the data to make a broken line graph.

Day of the week	Mon	Tue	Wed	Thur	Fri
Temperature (°C)	19	20	22	23	26

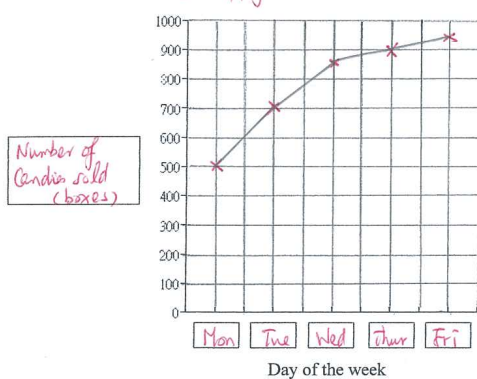
Title: Temperature in City Y last week



4. The table below shows the sales volume of candies last week. Use the data to make a broken line graph.

Day of the week	Mon	Tue	Wed	Thur	Fri
Number of candies sold (boxes)	500	700	850	900	950

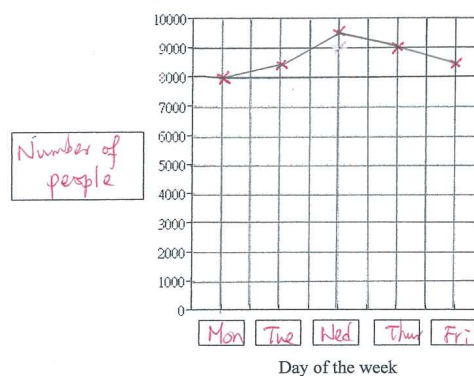
Title : Sales of candies last week



8. The table below shows the number of people who went to an exhibition in the past 5 days. Use the data to make a broken line graph.

Day of the week	Mon	Tue	Wed	Thur	Fri
Number of people	8000	8500	9500	9000	8500

Title : People who went to an Exhibition in the past 5 days



Level 2

- 1) The manager of a restaurant recorded the number of lunch boxes sold in the first half of the year.

Month	Jan	Feb	Mar	Apr	May	Jun
Number of lunch boxes sold	3000	1500	900	900	2500	3100

- (a) Draw a broken line graph to show the number of lunch boxes sold in the first half of the year.
- (b) Between which two consecutive months did the number of lunch boxes sold increase greatly? *(Apr and May)*
- (c) Between which two consecutive months did the number of lunch boxes sold decrease greatly? *(Jan & Feb)*
- (d) Between which two consecutive months did the number of lunch boxes sold remain unchanged? *(Mar & Apr)*
- (e) How would you describe the trend in number of lunch boxes sold in the second half of the year? Increased, remained unchanged or decreased? *(accept any reasonable answer)*

- 2) Mr Law owns a tutorial centre. He recorded the income and the expenses in the second half of the year.

Month	Jul	Aug	Sept	Oct	Nov	Dec
Income (dollars in ten thousands)	16	14	20	20	38	40

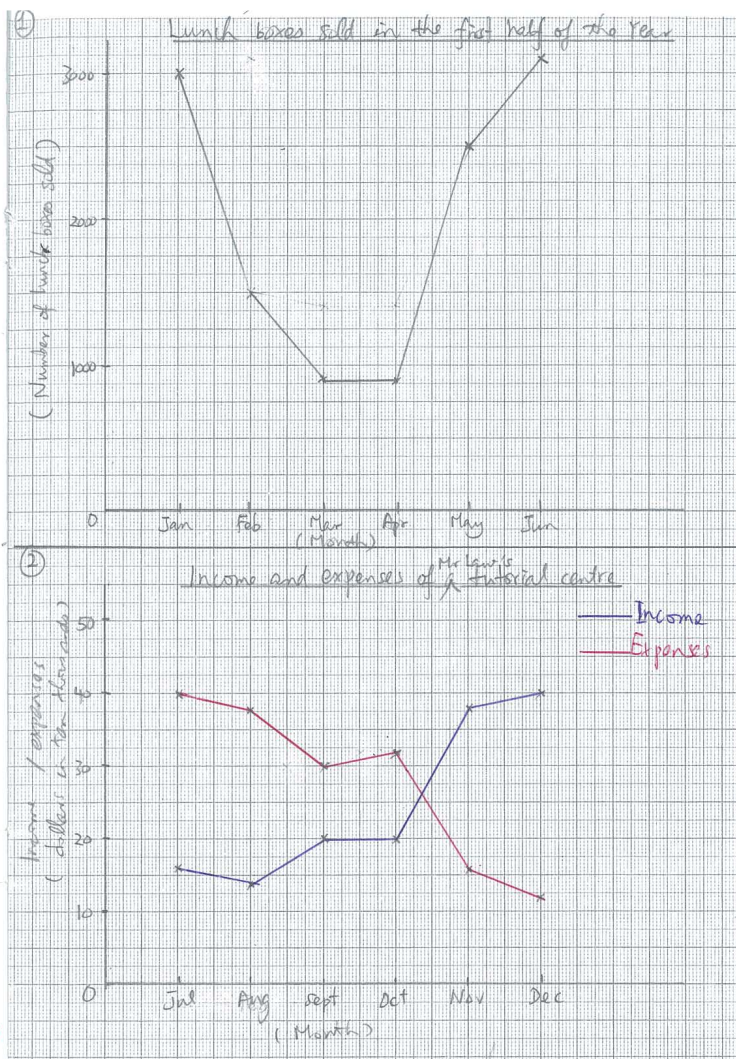
- (a) Draw a broken line graph to show the income of the tutorial centre in the second half of the year.
- (b) Between which two consecutive months did the income increase the most? *(Oct & Nov)*
- (c) Between which two consecutive months did the income remain unchanged? *(Sept & Oct)*
- (d) Between which two consecutive months did the income decrease slightly? *(Jul & Aug)*
- (e) How would you describe the overall trend in income of the tutorial centre in the second half of the year? Increased, remained unchanged or decreased? *Increase*

Month	Jul	Aug	Sept	Oct	Nov	Dec
Expenses (dollars in ten thousands)	40	38	30	32	16	12

- (f) Draw broken lines on the graph above to show the expenses of the tutorial centre in the second half of the year.
- (g) The expenses were the greatest in Jul, \$ 40000 was spent.
- (h) The expenses were the least in Dec, \$ 12000 was spent.
- (i) The expenses between Sept and Oct increased.
- (j) The expenses between Jul and Sept, Oct and Dec decreased.
- (k) The difference in expenses was the largest between these two consecutive months: Oct and Nov
- (l) The expenses in the second half of the year (increased / remained unchanged / decreased) as a whole.
- (m) The expenses in January next year may be (more than / the same as / less than) the expenses in December this year.

p.13

(accept any reasonable answer)



Collecting and analysing data – range

The **range** is the spread of data. To find it, we subtract the lowest value from the highest value. Look at these sets of test scores from 2 different Maths groups. The tests were out of 20.

Group 1	Group 2
20, 19, 15, 11, 18, 4, 3	15, 13, 12, 11, 10
$20 - 3 = 17$	$15 - 10 = 5$
Range = 17	Range = 5

Group 1 has a far wider range of abilities. Their teacher will have to plan for kids who get the topic, kids who kind of get it, and kids who need lots of support. Group 2's range is much smaller. No one has really mastered the concept and no one has really struggled. The teacher will have fewer different needs to meet.

1 Warm up with these. Find the range for each set of numbers:

a 22, 14, 17, 13, 2, 33

$$33 - 2 = 31$$

b 123, 148, 55, 89, 94, 131

$$148 - 55 = 93$$

c 4.5, 9.2, 10.7, 11.2

$$11.2 - 4.5 = 6.7$$

2 This table shows weekly rental prices for 3 bedroom houses in 2 suburbs:

Suburb 1	Suburb 2
\$755 pw	\$980 pw
\$364 pw	\$150 pw
\$195 pw	\$1 235 pw
\$645 pw	\$780 pw
\$820 pw	\$525 pw

a What is the price range for Suburb 1?

$$820 - 195 = 625 \text{ pw}$$

b What is the price range for Suburb 2?

$$1235 - 150 = 1085 \text{ pw}$$

c What do these ranges tell you about the kinds of housing in these suburbs?

accept any reasonable answer
→ In suburb 2, there is a wider variety of houses.

Averages

A. Find the average of each group of numbers. (Question 1-14)

1. 28, 34, 40

$$(28 + 34 + 40) \div 3$$

$$= 102 \div 3$$

$$= 34$$

$$\text{Average} = 34$$

2. 53, 108, 79

$$(53 + 108 + 79) \div 3$$

$$= 240 \div 3$$

$$= 80$$

$$\text{Average} = 80$$

3. 16, 24, 33, 59

$$(16 + 24 + 33 + 59) \div 4$$

$$= 132 \div 4 = 33$$

$$\text{Average} = 33$$

4. 71, 110, 92, 127

$$(71 + 110 + 92 + 127) \div 4$$

$$= 400 \div 4 = 100$$

$$\text{Average} = 100$$

5. 32, 45, 53, 44

$$(32 + 45 + 53 + 44) \div 4$$

$$= 174 \div 4 = 43.5$$

$$\text{Average} = 43.5$$

6. 60, 85, 37, 96

$$(60 + 85 + 37 + 96) \div 4$$

$$= 278 \div 4 = 69.5$$

$$\text{Average} = 69.5$$

7. 20, 35, 35, 80, 100

$$(20 + 35 + 35 + 80 + 100) \div 5$$

$$= 270 \div 5 = 54$$

$$\text{Average} = 54$$

8. 47, 21, 59, 33, 75

$$(47 + 21 + 59 + 33 + 75) \div 5$$

$$= 235 \div 5 = 47$$

$$\text{Average} = 47$$

9. 47, 53, 65, 74, 98

$$(47 + 53 + 65 + 74 + 98) \div 5$$

$$= 337 \div 5 = 67.4$$

$$\text{Average} = 67.4$$

10. 106, 38, 91, 54, 63

$$(106 + 38 + 91 + 54 + 63) \div 5$$

$$= 352 \div 5$$

$$\text{Average} = 70.4$$

11. 0, 12, 15

$$(0 + 12 + 15) \div 3$$

$$= 27 \div 3 = 9$$

$$\text{Average} = 9$$

12. 18.1, 20.6, 35.4

$$(18.1 + 20.6 + 35.4) \div 3$$

$$= 74.1 \div 3 = 24.7$$

$$\text{Average} = 24.7$$

13. 9.3, 0, 12.7, 6

$$(9.3 + 0 + 12.7 + 6) \div 4$$

$$= 28 \div 4 = 7$$

$$\text{Average} = 7$$

14. 30.5, 16.8, 21.4, 27.3

$$(30.5 + 16.8 + 21.4 + 27.3) \div 4$$

$$= 96 \div 4 = 24$$

$$\text{Average} = 24$$

B. Find the average of each group of numbers. (Question 15-18)

15. There are 38 pupils in P6A, 34 pupils in P6B, 33 pupils in P6C and 39 pupils in P6D. What is the average number of pupils in these classes?

The average number of pupils in these classes is:

$$(38 + 34 + 33 + 39) \div 4 = 144 \div 4 = 36 \text{ pupils}$$

16. In the mid-term examination, Jack got 83 marks for Chinese, 77 marks for English and 92 marks for both Mathematics and Putonghua. What is his average mark in these four subjects?

$$(83 + 77 + 92 + 92) \div 4 = 344 \div 4$$

His average mark is 86

17. The total of three numbers A, B and C is 214, and D is 86. What is the average of the 4 numbers A, B, C and D?

$$(214 + 86) \div 4 = 300 \div 4 = 75$$

The average of the 4 numbers is 75.

18. The average of 5 numbers is 52. If the first 4 numbers are 46, 58, 69, and 33 respectively, find the 5th number.

$$52 \times 5 - (46 + 58 + 69 + 33) = 260 - 206 = 54$$

The 5th number is 54

19. The average of A and B is 65, and the average of C and D is 29. What is the average of the 4 numbers A, B, C and D?

$$(65 \times 2 + 29 \times 2) \div 4 = (130 + 58) \div 4 = 47$$

$$\text{or } (65 + 29) \div 2 = 94 \div 2 = 47$$

The average is 47

20. The following table shows the prices of three brands of notepad in a stationery shop.

Brand	Price
A	\$15 each
B	\$25 for two notepads
C	\$11.50 each

If Benny buys two notepads of each brand, what will be the average price of one notepad? (Show your working)

$$(2 \times 15 + 25 + 11.5 \times 2) \div 6 = (30 + 25 + 23) \div 6 = 78 \div 6 = 13$$

The average price of one notepad is \$13.

Collecting and analysing data – mean

When we say we are finding the average, we are finding the mean. To do so, we find the sum of all the values and then divide by the number of values:

$$\text{For example, the mean of } 2, 3, 4, 5, 6 = \frac{2 + 3 + 4 + 5 + 6}{5} = 4$$

The mean is just like fair shares. If all the values were shared out fairly, how many would each group receive?

- 1 Warm up with these. Find the mean for each set of numbers:

a 20, 6, 18, 4

$$(20 + 6 + 18 + 4) \div 4 = 48 \div 4 = 12$$

b 13, 7, 5, 8, 3, 2, 4

$$13 + 7 + 5 + 8 + 2 + 4 = 42 \div 7 = 6$$

c 45, 46, 47, 50, 57

$$45 + 46 + 47 + 50 + 57 = 245 \div 5 = 49$$

- 2 Sean wanted to buy new soccer boots and priced the same boots in 4 different stores.

Steve's Sports \$45	Sport Stars \$54		Soccer City \$48	Sports First \$53
------------------------	---------------------	---	---------------------	----------------------

a What is the average or mean price of the boots? $(45 + 54 + 48 + 53) \div 4 = 200 \div 4 = 50$

\$50

b If Sean buys the cheapest option, how much less than the mean does he spend? $50 - 48 = 2$

\$2

- 3 Imagine these people are all members of a basketball team.

Tom Cruise	1.73 m
Katie Holmes	1.75 m
Will Smith	1.88 m
David Beckham	1.8 m
Kevin Rudd	1.79 m
Paris Hilton	1.73 m
Hugh Jackman	1.89 m
Nicole Kidman	1.81 m
Nicole Richie	1.55 m

a Calculate the mean height: $15.93 \div 9 = 1.77 \text{ m}$

b If you wanted your tallest 5 players on court at the same time, who would they be and what is their mean height?

$$\text{Will Smith, Nicole Kidman, David Beckham, Kevin Rudd, Hugh Jackman} \\ (1.88 + 1.81 + 1.8 + 1.79 + 1.89) \div 5 = 9.17 \div 5 = 1.834 \text{ m}$$

c Tom Cruise pulls rank and subs himself for Hugh Jackman and subs Nicole Richie for Nicole Kidman. What is the mean height of the group on court now?

1.75 m

$$(1.73 + 1.55 + 1.88 + 1.8 + 1.79) \div 5 = 8.75 \div 5 = 1.75 \text{ m}$$

Data Representation

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Collecting and analysing data – median

Another statistic we use to analyse data is the median. The median is the middle number when the data is put in order. Look at:

17 12 3 5 25 33 12 14 36 22 23 29 37
We reorder the numbers and count in from either end:
5 5 12 12 14 17 22 23 25 29 33 36 37
22 is the median or middle number. There are 6 numbers on either side of it.

- 1 Order these sets of numbers and find the median for each:

a 13, 7, 5, 8, 3, 2, 4

2, 3, 4, 5, 7, 8, 13
5 is the median

c 4.5, 8.2, 3.6, 4.1, 2.3, 1.7, 7.3

2.3, 3.6, 4.1, 4.5, 7.3, 8.2
4.5 is the median

b 22, 6, 18, 4, 7, 23

4, 6, 7, 18, 22, 23
(7+18) ÷ 2 = 12.5
12.5 is the median
or 7 and 18

d 45, 46, 47, 50, 59, 102

45, 46, 47, 50, 59, 102
(47+50) ÷ 2 = 48.5
The median is 48.5
or 47 and 50

If we have an odd number of values in the set, there is 1 median.
If we have an even number of values, there will be 2 median numbers. Or we can find the average of the two numbers and call that the median.



- 2 Remember your all-stars basketball team?

Tom Cruise	1.73 m
Katie Holmes	1.75 m
Will Smith	1.88 m
David Beckham	1.8 m
Kevin Rudd	1.79 m
Paris Hilton	1.73 m
Hugh Jackman	1.89 m
Nicole Kidman	1.81 m
Nicole Richie	1.55 m

- a Put the players in order from shortest to tallest.

Nicole Richie 1.55 m
Tom Cruise 1.73 m
Paris Hilton 1.73 m
Kevin Rudd 1.79 m
David Beckham 1.8 m
Nicole Kidman 1.81 m
Will Smith 1.88 m
Hugh Jackman 1.89 m

- b Which player has the median height?

Kevin Rudd has the median height 1.79m

- 3 There are 7 values in a set of mystery numbers. 9 is the median. What could the set be?

1 5 6 9 12 14 16 (any reasonable answer)

Collecting and analysing data – mode

Another statistic we use when analysing data is the mode. The mode is the number that occurs most frequently in a set. Look at:

17 12 4 5 25 33 12 14 4 36 22 23 29 37 26 4 34
When working with a lot of numbers, it is a good idea to organise the data into a stem and leaf plot. This makes it easy to identify the mode. The stem and leaf plot below has all the tens on the left as the stem, and the units on the right as the leaves.

We organise this as:

tens	units
3	3 6 7 4
2	5 2 3 9 6
1	7 2 2 4
0	4 5 4 4

When we look at the numbers this way it is easy to see that 4 is the mode. It occurs 3 times. A set of numbers can have 1 mode such as the one above. It can have no modes if no numbers are repeated or 2 or more modes if more than one value occurs with the same frequency.

- 1 Organise these sets of numbers into stem and leaf plots and identify the modes. The stems have been done for you:

a 29, 17, 17, 18, 19, 11, 13, 19, 20, 17, 17, 13

tens	units
2	9 0
1	7 7 8 9 13 9 7 7 3
0	

The mode is: 17

b 24, 18, 27, 13, 16, 25, 32, 26, 31, 18, 17, 23, 16

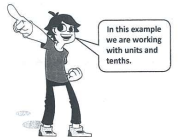
tens	units
3	2 1
2	4 7 5 6 3
1	8 3 6 8 7 6
0	

The mode is: 18 and 16

c 1.7, 2.2, 1.6, 1.8, 1.6, 1.5, 0.4, 1.6, 1.7, 2.1, 2.3

units	tenths
2	2 1 3
1	7 6 8 6 5 6 7
0	4

The mode is: 1.6



In this example we are working with units and tenths.

Collecting and analysing data – mode

When we collect and analyse data, we often use frequency tables. These also tell us the mode. Look at this table. It shows the jumper sizes worn by the students in 6A.

Jumper Size	Tally	Frequency
10		10
12		6
14		15

Q: What size jumper is worn most frequently?
A: Size 14 jumpers.

14 is the mode as it's the number that occurs most often.

- 2 Complete the frequency tables below and identify the mode for each:

a

No. of Children in the Family	Tally	Frequency
1		7
2		15
3		11

The mode is: 2

b

Shoe Size	Tally	Frequency
5		7
6		5
7		10
8		8

The mode is: 7

- 3 Wally is trying out for the Work Experience Boy Olympics. His favourite event is the Coffee Dash when he races to the local coffee shop and back for the morning lattes. Here are his times so far, rounded to the nearest minute:

12 min	11 min	13 min	9 min	8 min	14 min	16 min
11 min	14 min	19 min	10 min	11 min	15 min	22 min
17 min	23 min	22 min	12 min			

- a Choose a method to find the mode of this set of data and record it below:

Stem and leaf plot

Tens	Units (min)
2	3 2 2
1	2 1 7 1 4 3 9 0 2 1 4 5 6
0	9 8

The mode is 11 min

or Frequency table The mode is 11 min

Time	Tally	Frequency
8		1
9		1
10		1
11		3
12		2
13		1
14		2
15		1
16		1
17		1
18		1
19		1
20		1
21		1
22		1
23		1

Collecting and analysing data – range, mean, median and mode

When we analyse data we can look at the range, mean, median and mode. We most commonly use mean or average in our daily lives. It does have one drawback though – it is affected by outliers. These are numbers that might be much larger or smaller than the others in the set, and can drag the average up or down.

When there are outliers, the median can be more useful than the mean. The mode is most useful when we want to know which category or value is most popular.

- 1 Look at the table on the right. It shows the money raised by 6G each week in their cork drive.

Week	Money Raised
1	\$15
2	\$12
3	\$9
4	\$13
5	\$59
6	\$14
7	\$11

- a What is the mean (average) amount of money raised?

$$(15 + 12 + 9 + 13 + 59 + 14 + 11) \div 7 = 133 \div 7 = 19$$

\$19

- b What is the median amount of money raised?

Rearrange the data
9, 11, 12, 13, 14, 15, 59

\$13

- c Which do you think better reflects the weekly figures? Why?

The median as most figures are closer to \$13 than \$19, since the exceptional large number affect the mean

- d Does this set of data have a mode?

No

- e What is the range? $59 - 9 = 50$

\$50

- 2 Survey your classmates on their shoe size. Find a way to record the data and present it below. Calculate the mean, median, mode and range of your data set.

